SECTION 15470 – L.P. GAS SYSTEM

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Pipe and pipe fittings.

B. Valves.

C. L.P. gas piping system.

1.2 REFERENCES

A. ANSI/ASME B16.3 Malleable Iron Threaded Fittings Class 150 NS 300.

B. ANSI/AWS DI.1 - Structural Welding Code.

C. ANSI/AWWA C105 - Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids.

D. ASTM A53 - Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless.

E. ASTM A234 - Pipe fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures.

F. ASTM D2513 Thermoplastic Gas Pressure Pipe, Tubing and Fittings.

G. NFPA 54 - National Fuel Gas Code.

1.3 QUALITY ASSURANCE

A. Valves: Manufacturer’s name and pressure rating marked on valve body.

B. Welding Materials and Procedures: Conform to ASME Code and applicable state labor regulations.

C. Welder Certification: In accordance with ANSI/AWS DI.l.

D. Design shall be in conformance with local gas supplier, NFPA 54, and local fuel gas codes.

1.4 SUBMITTALS

A. Submit product data under provisions of Section 01300.

B. Include data on pipe materials, pipe fittings, valves and accessories.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of Section 01600.

B. Store and protect products under provisions of Section 01600.

C. Deliver and store valves in shipping containers with labeling in place.

PART 2 – PRODUCTS

2.1 L.P. GAS PIPING, ABOVE GRADE

A. Steel Pipe: ASTM A53 or A120, Schedule 40 black. Fittings: ANSI/ASE B163, malleable iron, or ASTM A234, forged steel welding type. Joints: Screwed for pipe two inches and under; ANSI/AWS DI.1, welded for pipe over two inches.

2.2 FLANGES, UNIONS, AND COUPLINGS

A. Pipe Size 2 Inches and Under: 150 psig malleable iron unions for threaded ferrous piping.

2.3 ACCEPTABLE MANUFACTURER - VALVES

A. Gas cocks: Conbraco, De Zurik, Eclipse, Hays, Homestead, or T & S Brass.

B. Items of the same function and performance are acceptable if submitted and approved in conformance with Section 01600.

2.4 GAS COCKS

A. Up to 2 Inches: Bronze body, bronze tapered plug. Non-lubricated, teflon packing, threaded ends, equal to Hays No. 7065.

B. Over 2 Inches: Cast iron body and plug, non-lubricated, teflon packing, flanged ends, equal to.

PART 3 - EXECUTION

3.1 PREPARATION

A. Ream pipe, remove burrs, and bevel plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

3.2 INSTALLATION

A. Route piping in orderly manner and maintain gradient.

B. Install piping to conserve building space and not interfere with use of space.

C. Group piping whenever practical at common elevations.

D. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

E. Provide clearance for installation of and access to valves and fittings.

F. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors with Section 08305.

G. Establish elevations of buried piping outside the building to ensure not less than 3 feet of cover.

H. Prepare pipe, fittings, supports, and accessories not prefinished, ready for finish painting. Paint all exposed exterior piping (1 coat primer, 1 coat finish) per Architect's color scheme. Refer to Section 09900.

I. Install valves with stems upright or horizontal, not inverted.

3.3 APPLICATION

A. Install unions downstream of valves and at equipment or apparatus connections.

B. Install gas locks for shut-off and to isolate equipment, part of systems, or vertical risers.

3.4 SERVICE CONNECTIONS

A. Provide new gas service connection to 5'-0" outside building above grade.

B. Prime and paint all exterior gas piping. Architect to select color.

END OF SECTION 15470